

Amendments to the Claims

Please cancel pending claims 1-15 and consider new claims 16-21. This listing of claims will replace all prior versions and listings of claims in the present application.

1-15. (Cancelled).

16. (New) A rotating, radially-ventilated cylinder roll for the through-air-processing of permeable and semi-permeable webs, the cylinder roll comprising:

a plurality of plates extending radially from rotatable hub and connected to end portions disposed at the ends of the hub, the hub defining a longitudinal axis about which the hub and the plurality of plates are rotatable, the plurality of radial plates defining a plurality of conduits extending along the length of the roll;

an air distributor disposed concentrically about the hub and coaxial with the longitudinal axis, the air distributor dividing the plurality of conduits into an outer chamber and an inner chamber, the air distributor further defining a plurality of apertures through which air may pass;

a support structure disposed concentrically about the hub and coaxially with the longitudinal axis, the support structure attached to and enclosing the plurality of radial plates;

an air dam disposed radially about the hub, the air dam connected to the air distributor, the support structure, and the plurality of plates, the air dam dividing the outer chamber into a front chamber and a rear chamber;

wherein air drawn through the cylinder roll for the through-air-processing of permeable and semi-permeable webs enters radially through the front chamber of the cylinder roll and exits radially through the rear chamber of the cylinder roll.

17. (New) The cylinder roll of claim 16 further comprising a screen disposed about the support structure.

18. (New) The cylinder roll of claim 16 wherein the support structure defines a plurality of ports thereon.

19. (New) The cylinder roll of claim 16 wherein the plurality of apertures within the air distributor are variable in size.

20. (New) The cylinder roll of claim 19 wherein the plurality of apertures are smaller in size near the air dam and larger in size near the ends of the roll.

21. (New) The cylinder roll of claim 16 wherein the conduits are variable in size.